Recorded water levels in this bulletin are derived from a representative network of water level gages on each lake (see cover **map**). Providers of these data are the National Ocean Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce, and the Marine Environmental Data Service, Department of Fisheries and Oceans, Canada. The Detroit District, Corps of Engineers and Environment Canada derive historic and projected lake levels under the auspices of the Coordinating Committee on Great Lakes Basic Hydraulic and Hydrologic Data.

This bulletin is produced monthly as a public service. Tables of possible storm-induced rises at key locations on the Great Lakes are available on request. The Corps also publishes the "Great Lakes, Connecting Channels and St. Lawrence River Water Levels and Depths," twice monthly, which provides a forecast of depths in the connecting rivers between the Great Lakes and the International Section of the St. Lawrence River. These publications can be obtained free of charge by writing to the address shown on the front cover, or by calling (313) 226-6441. Notices of change of address should include the name of the publication(s). The Internet address **http://www.lre.usace.army.mil/glhh** also contains this information.

Great Lakes Basin Hydrology
December 2010

Precipitation in December was well below average across the Great Lakes with the exception of the Lake Ontario basin. The Lake Ontario basin was the only basin to receive above average precipitation during December. The annual precipitation for 2010 was below average in the Lake Superior and Lake Michigan Huron basins while the Lake Erie and Lake Ontario basins received near average precipitation in 2010. Outflows from Lake Superior and Lake Michigan-Huron were below average in December. Lake Erie had near average outflows while Lake Ontario had above average outflows in December. The tables below list December precipitation, water supply, and outflow information for the entire Great Lakes basin.

Comparison of December monthly mean water levels to long-term (1918-2009) average shows Lakes Superior, Michigan-Huron, St. Clair and Erie were 13, 19, 7 and 5 inches below average, respectively. Lake Ontario was near its long-term average.

PRECIPITATION (INCHES)

BASIN	December				12-Month Comparison			
	2010	Average (1900-2008)	Diff.	% of Average	Average Last 12 months	Average (1900-2008)	Diff.	% of Average
Superior	0.71	2.01	-1.30	35	26.80	30.45	-3.65	88
Michigan-Huron	1.07	2.31	-1.24	46	28.81	32.30	-3.49	89
Erie	1.57	2.63	-1.06	60	34.53	35.27	-0.74	98
Ontario	3.20	2.92	0.28	110	35.96	35.65	0.31	101
Great Lakes	1.29	2.34	-1.05	55	29.48	32.52	-3.04	91

Lake	December WATER SUPPLIES[1] (cfs)		December OUTFLOW[2] (cfs)	
	2010	Average[4] (1900-1989)	2010	Average[3] (1900-1999)
Superior	-61,000	-23,000	55,000	73,000
Michigan-Huron	-10,000	30,000	168,000	184,000
Erie	3,000	17,000	194,000	199,000
Ontario	45,000	27,000	251,000	234,000

Notes: Values (excluding averages) are based on preliminary computations. CFS denotes cubic feet per second.
[1] Negative water supply denotes evaporation from lake exceeded runoff from local basin.
[2] Does not include diversions.
[3] Niagara and St Lawrence rivers average outflows are based on period of record 1900-1989 and 1900-2005, respectively
[4] Lakes Erie and Ontario average water supplies based on 1900-1989